

ABSTRACT

Plant essential oils and chitosan salts were tested individually and in combination against a postharvest pathogen *Botrytis cinerea* and two foodborne human pathogens *Escherichia coli* and *Listeria monocytogenes*. Four essential oils (cinnamon, allspice, savory, red thyme) in combination with two chitosan salts (chitosan sorbate and chitosan propionate) demonstrated synergistic antimicrobial activity against all three organisms. The synergistic combinations of essential oils and chitosan salts also demonstrated an eradicator activity against *E. coli* on apple disks previously inoculated with the organism. Synergistic combinations of essential oils and chitosan salts hold promise of giving superior control of both postharvest decay organisms and foodborne human pathogens.